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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,558	02/12/2004	Jeff Moreau	N1569-71508	5746
32009	7590	07/06/2006		
BRADLEY ARANT ROSE & WHITE LLP 200 CLINTON AVE. WEST SUITE 900 HUNTSVILLE, AL 35801				
			EXAMINER AN, SANG WOOK	
			ART UNIT 1732	PAPER NUMBER

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/777,558	Applicant(s) MOREAU, JEFF	
	Examiner Sang W. An	Art Unit 1732	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/12/2004</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 13-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyant et al (20040013474) in view of Kerr et al (6303068) and Green (5763047).

Regarding claim 1, Weyant et al teach a method of manufacturing a sheet piling (fig 4), comprising: pulling fibers through a bath of a base material; weaving the fibers into a matrix; forming the sheet piling comprising the matrix and base material (par 0003) but does not teach placing a fabric layer on a side of the sheet piling; curing the sheet piling; and removing the fabric layer so that an abrasive surface is left on the side of the sheet piling.

However, Kerr et al teach forming a texture on a rubber mat by placing a fabric with desired embossment and vulcanizing/curing the rubber, and thereafter removing the fabric so that a textured surface is left behind the rubber (fig 1).

Furthermore, Green teaches a textured liner/retaining wall for protecting soil from waste products (col 1 lines 5-7). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to modify Weyant et al's method of manufacturing a sheet piling to include a step of placing a removable fabric layer as

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taught by Kerr et al so that an abrasive/textured surface is left on the side of the sheet piling as taught by both Kerr et al and Green. One would have been motivated to do so in order to improve the soil gripping properties of the retaining wall system (Green '5763047'; col 1 lines 5-12).

Regarding claim 2, Weyant et al do not teach the fabric layer is placed on both sides of the sheet piling. Although Kerr et al teaches fabric layer only one side of the rubber mat (fig 1), it would have been obvious to one having ordinary skill in the art at the time of invention to modify Weyant et al's method of manufacturing a sheet piling to include a step of placing fabric layer on both sides of the sheet piling. One would have been motivated to do so to double the soil gripping properties of the retaining wall system.

Regarding claims 3 and 4, Weyant et al do not teach fabric layer that is woven in a uniform or random pattern. Although Kerr et al do not teach random pattern, since Kerr et al teach a woven fabric that is woven in a uniform pattern, one with ordinary skill in the art would recognize that the fabric may also be woven in a random pattern (fig 1). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to modify Weyant et al's method of manufacturing a sheet piling to include fabric woven in a uniform or random pattern to texturize the sheet piling to a desired pattern.

Regarding claims 13-15, Weyant et al teach sheet piling that is flat (fig 5, 60), sheet piling that is corrugated (fig 4, 60), and sheet piling comprising a plurality of panels and each panel is joined to at least one other panel at an angle (figs 6-8).

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3. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyant et al (20040013474) in view of Kerr et al (6303068) and Green (5763047) as applied above for claims 1-4, 13-15 and 17, further in view of Yook (5939176). The teachings of Weyant et al in view of Kerr et al and Green are as described above for claim 1-4, 13-15 and 17.

Regarding claims 5 and 6, Weyant et al do not teach fabric layer comprising a plurality of strips of woven fabric that are arranged in a random pattern. However, Yook teaches plurality of strips of woven fabric arranged in a random pattern (fig 12). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to modify Weyant et al's method of manufacturing a sheet piling to include plurality of strips of woven fabric that are arranged in a random pattern in order to form a desired pattern on the sheet piling.

4. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyant et al (20040013474) in view of Kerr et al (6303068) and Green (5763047) as applied above for claims 1-4, 13-15 and 17, further in view of Rydin (2004/0109960). The teachings of Weyant et al (20040013474) in view of Kerr et al (6303068) and Green are as described above for claims 1-4, 13-15 and 17.

Regarding claims 7-9, Weyant et al do not teach fabric layer that is made of polyester, nylon, and Kevlar. However, Rydin teaches fabric made from either polyester, nylon, or Kevlar (par 0056). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention modify Weyant et al's method of manufacturing a sheet piling to include fabric made from either polyester, nylon, or

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Kevlar. One would have been motivated to do so to control the material properties of the fabric such as tensile strength.

5. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weyant et al (20040013474) in view of Kerr et al (6303068) and Green (5763047) as applied above for claims 1-4, 13-15 and 17, further in view of Schortmann (5204165). The teachings of Weyant et al in view of Kerr et al and Green are as described above for claims 1-4, 13-15 and 17.

Regarding claim 10, Weyant et al do not teach fabric layer having a thickness of 5-8 mils. However, Schortmann teaches a barrier fabric having a thickness of 5.18 mils (Table III). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to use the modify Weyant et al's method of manufacturing a sheet piling to include a fabric layer having a thickness of 5-8 mils in order to achieve a desired thickness for the application.

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyant et al (20040013474) in view of Kerr et al (6303068) and Green (5763047) as applied above for claims 1-4, 13-15 and 17, further in view of Koyfmann (6346492). The teachings of Weyant et al in view of Kerr et al and Green are as described above for claims 1-4, 13-15 and 17.

Regarding claims 11 and 12, Weyant et al do not teach fabric layer having a warp count of 57-160 ends per inch and fill count of 35-103 picks per inch. However, Koyfmann teaches fabric weave density is typically defined by warp count and fill count (col 3 lines 46-47). Thus warp and fill count is a result effective variable. The Examiner

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notes that discovering the optimum value of a result effective variable involves only routine skill in the art "In re Boesch," 617 F.2d 272,205 USPQ 215 (COPA1980)."

Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to modify Weyant et al's method of manufacturing a sheet piling to include fabric layer having a warp count of 57-160 ends per inch and fill count of 35-103 picks per inch in order to optimize the process.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 9 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sang Wook An *guit*  
Patent Examiner  
Art Unit 1732  
June 20, 2006

*ct*  
CHRISTINA JOHNSON  
PRIMARY EXAMINER

*6/23/06*